

## Photoresist dispensing device

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### Abstract of TW459073B

A photoresist dispensing device for use in applying a metered amount of photoresist on a wafer comprises, a photoresist storage tank, a nozzle for spraying the photoresist on the wafer, a feeder unit for drawing a metered amount of the photoresist out of the storage tank and discharging it through the nozzle, a pneumatic control unit for controlling the operation of the feeder unit with the use of pressurized air; and a filter disposed in between the storage tank and the feeder unit for removing alien matters present the photoresist. The feeder unit includes a base having an inlet port leading to the storage tank, an outlet port leading to the nozzle and first through third intermediate passageways interconnecting the inlet and outlet ports, a first cutoff valve mounted on the base at a position between the inlet port and the first intermediate passageway, a diaphragm pump attached to the base at a position between the first and second intermediate passageways, a second cutoff valve secured to the base at a position between the second and third intermediate passageways, and a suck-back valve affixed to the base at a position between the third intermediate passageway and the outlet port.

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Photoresist dispenser for semiconductor manufacture, has pneumatically controlled discharge unit by which photoresist is supplied from tank to nozzle

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Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000243698	A	20000908	JP 200040154	A	20000217	200063 B
KR 2000056254	A	20000915	KR 995403	A	19990218	200122
US 6332924	B1	20011225	US 2000506813	A	20000218	200206
KR 280770	B	20010115	KR 995403	A	19990218	200207
TW 459073	A	20011011	TW 2000102680	A	20000217	200247

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Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2000243698	A	7	H01L-021/027	
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KR 280770	B		H01L-021/027	Previous Publ. patent KR 2000056254
TW 459073	A		C30B-035/00	

Abstract (Basic): JP 2000243698 A

NOVELTY - A base (42) of discharge unit (24) is connected between inflow and discharge routes (44,46). Interruption valve (54) connected in base is connected between inflow route and connection route (48). A pump (56) is connected between connection routes (48,50). Interruption valve (58) is connected between connection routes (52,54). A back valve (60) is connected between connection route (52) and discharge route.

DETAILED DESCRIPTION - The inflow route is connected to a storage tank in which photoresist is stored. The resist is discharged on a wafer by a nozzle connected to the discharge route. The operation of discharge unit is controlled by a pneumatic controller (100). A filter (34) is arranged between the tank and discharge unit to filter the photoresist.

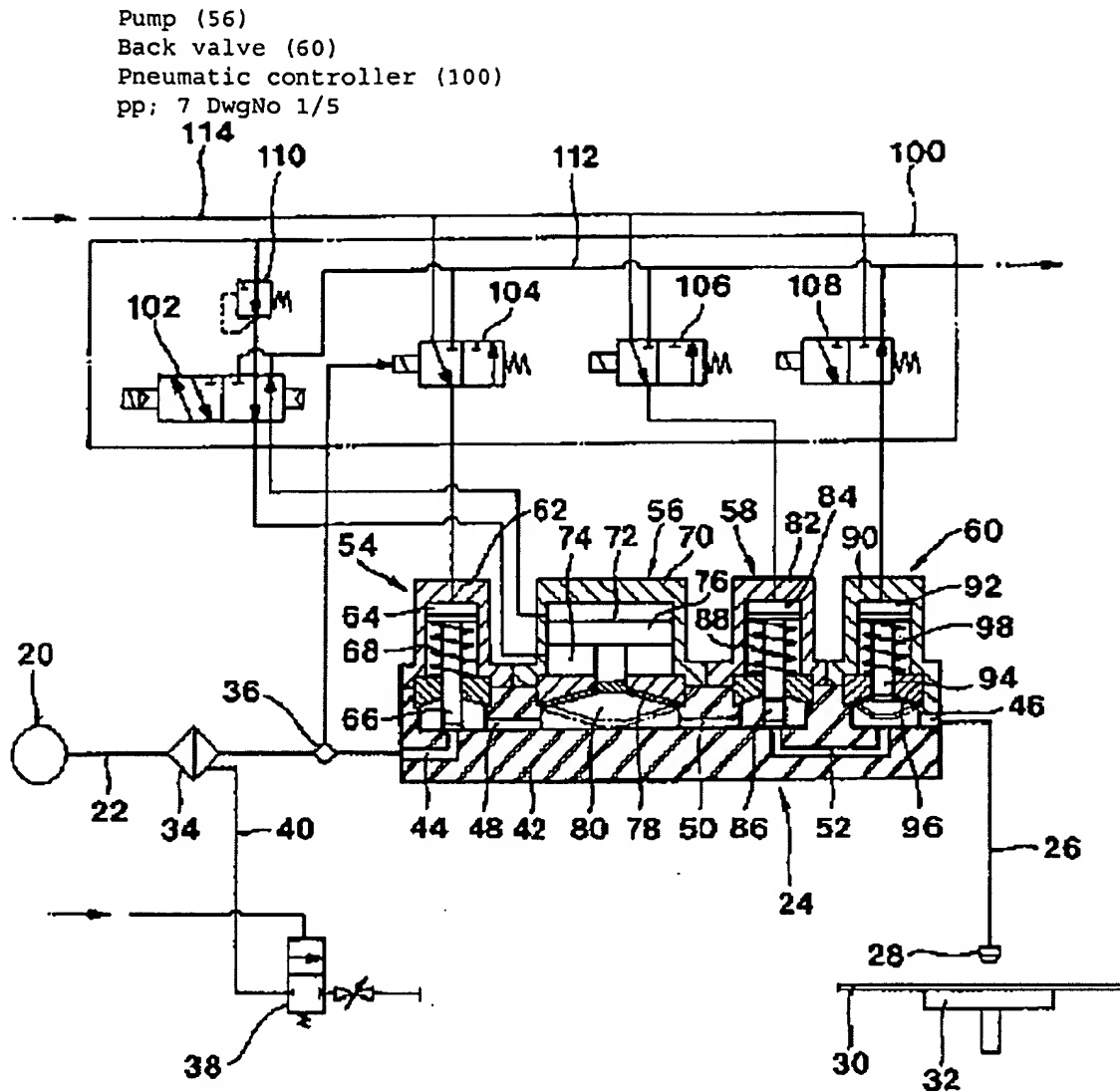
USE - For applying photoresist film in manufacture of semiconductor device.

ADVANTAGE - Facilitates injection of photoresist of desired quantity on wafer at constant pressure. Simplifies repair and exchange of discharge unit by simplifying structure of discharge unit.

DESCRIPTION OF DRAWING(S) - The figure shows the explanatory drawing of photoresist dispensing apparatus.

Discharge unit (24)  
 Filter (34)  
 Base (42)  
 Inflow route (44)  
 Discharge route (46)  
 Connection routes (48,50,52,54)  
 Interruption valves (54,58)

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Title Terms: PHOTORESIST; DISPENSE; SEMICNDUCTOR; MANUFACTURE; PNEUMATIC;  
CONTROL; DISCHARGE; UNIT; PHOTORESIST; SUPPLY; TANK; NOZZLE

Derwent Class: G06; L03; P42; P84; U11; X25

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International Patent Class (Additional): G03F-007/16

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